

AUDIO UPGRADES
Panasonic AG1960
Sony SLV-R5UC
from
The Carlson-Strand Co.

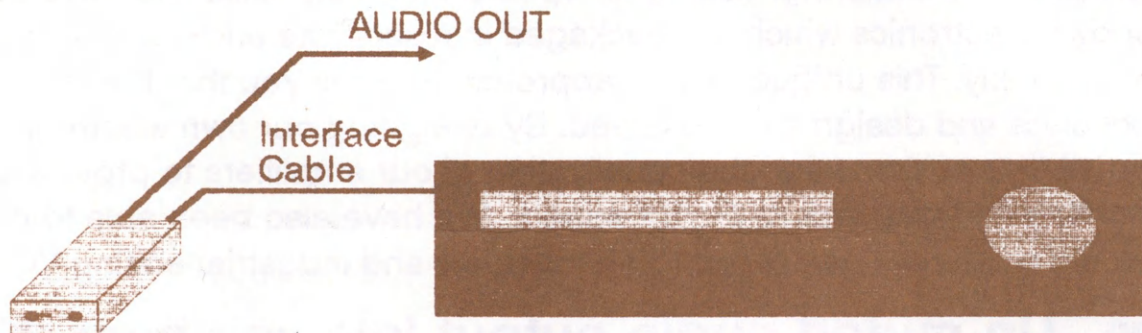
We, at the Carlson-Strand Co., have developed a simple, straight forward method of upgrading your VCR to provide a separate output or combination input/output for the linear track. Our upgrades are designed so they can be installed by anyone who can handle a screw driver. These upgrades are completely plug-in and require no soldering, cutting, or special technical skills. We have designed our own electronics which are packaged in a separate enclosure with its own power supply. This unique design approach assures you that the internal VCR electronics and design are preserved. By designing our own electronics we have been able to custom tailor the equalization of our amplifiers to provide excellent recording and playback at the SP speed. We have also been able to provide features and functions not found on most low end industrial editing VCRs.

- **Un-muted audio output lets you hear the linear track during Jog/Shuttle.**
- **Separate outputs let you mix the linear track with the HiFi tracks.**
- **The ability to record three tracks at one time in assembly mode.**
- **Insert audio "OnThe Fly" in Play mode.**

Carlson-Strand is a audio and video engineering company that specializes in the design, installation and maintenance of professional audio and video production and post production equipment. We know how important it is to have equipment that can do the job. We also know how important it is to retain the integrity of any piece of equipment whenever modifying it. That is why we feel that our audio adaptors are the only way to add audio features to your VCR.

CS100 LINEAR ADAPTOR

The CS100 Linear Track Adaptor provides an separate Audio Output for the Linear or monaural track on the AG1960 or SLV-R5UC. This output enhances the editing features of the VCR by allowing you to hear the audio on the linear track during functions such as JOG and Shuttle. The ability to hear this channel in all modes greatly assists the editing operator in locating the proper edit points. This additional output also provides a method of mixing the linear and HIFI tracks together by using a audio mixing board, a function missing on most VCRs.. The use of time code is also possible with the CS100 installed. Time code requires its own audio track that can be read at all speeds, a function the CS100 provides.



CS100

**AG1960
SLV-R5UC**

The CS100 is simple to install. No cutting, soldering, or special technical skills are required. The CS100 is a plug-in device which is installed by simply removing the VCR cover, un-plugging a small connector and plugging-in the CS100. The CS100 is a self contained device with its own power supply. No power from the VCR is used by the CS100. When the CS100 is turned off, the VCR returns to its normal operation. Removal of the CS100 is as easy as installing.

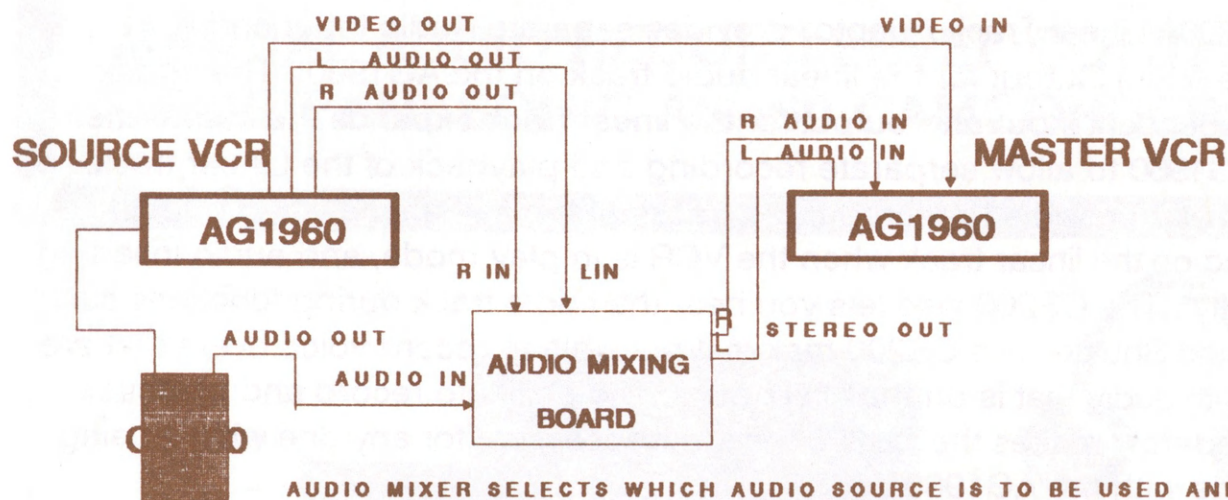
A CS100 is also available for the AG1950 and AG1830. The CS100 can also be used on other brands and models with the appropriate adaptors. Please contact before ordering the CS100 for the AG1950/1830 or other VCRs.

The Carlson - Strand Co.

San Clemente, California 92674-3761 (714) 492-8978

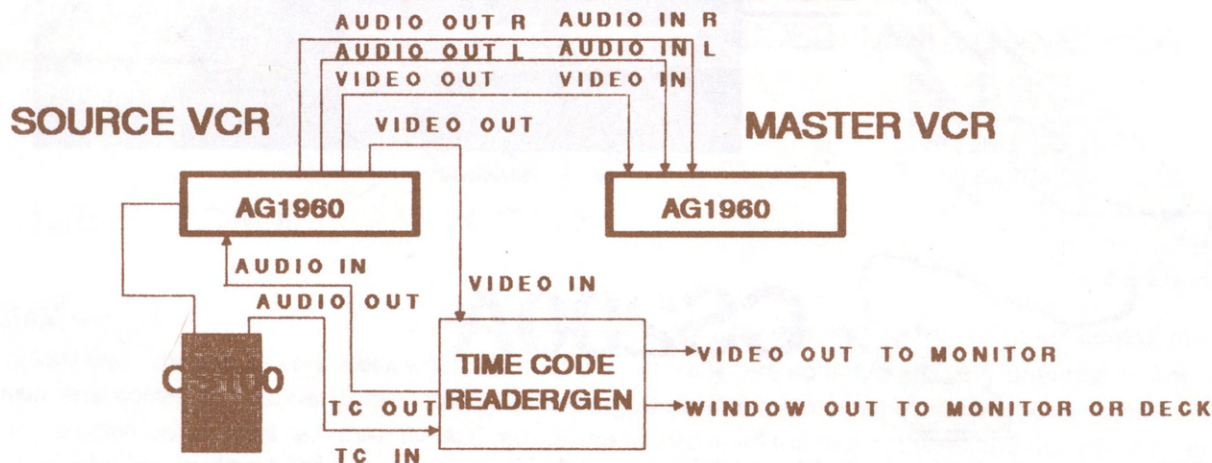
CS100 APPLICATIONS

TYPICAL AUDIO CONFIGURATION



AUDIO MIXER SELECTS WHICH AUDIO SOURCE IS TO BE USED AND THE LEVEL. AUDIO SOURCES CAN BE SOURCE VCR HIFI, LINEAR, AUX INPUTS OR ANY COMBINATION. OUT PUT CAN BE RECORDED ONTO THE MASTER VCR HIFI AND LINEAR TRACKS.

READING TIME CODE



RECORDING TIME CODE

1. TAPE TO BE RECORDED WITH TIME CODE IN SOURCE VCR.
2. VCR IN AUDIO DUB MODE (PAUSE)
3. TIME CODE GENERATOR IN GENERATE MODE.
4. RELEASE PAUSE
5. START TC GEN.

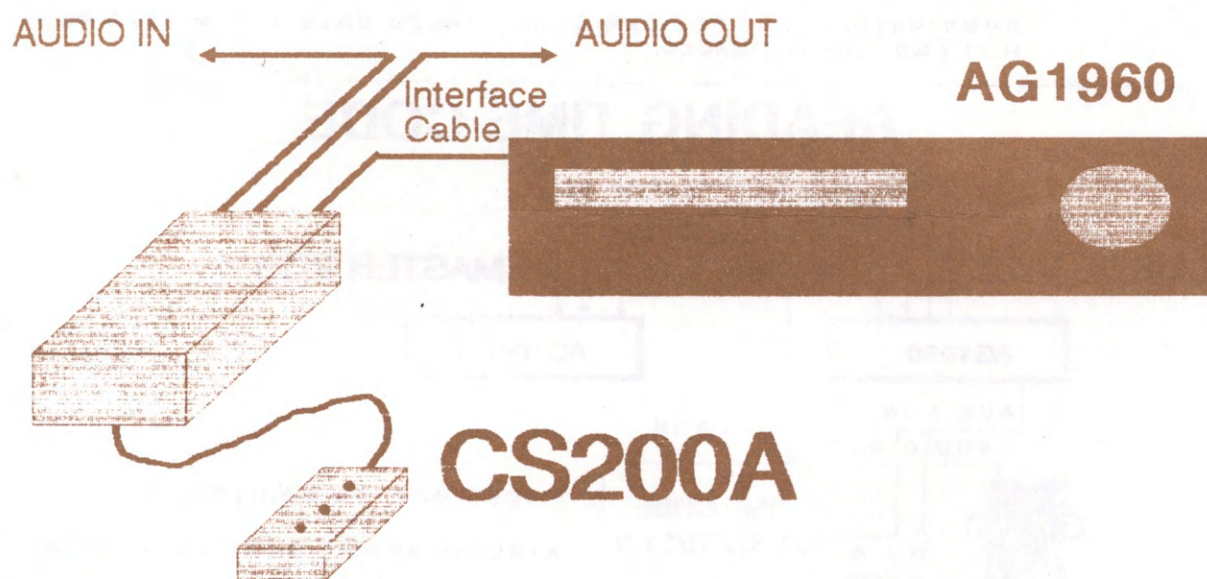
THIS PROCEEDURE WILL RECORD TIME CODE ONTO THE LINEAR TRACK. REMEMBER, THIS WILL ERASE ALL AUDIO ON THE LINEAR TRACK.

READING TIME CODE

1. SOURCE TAPE WITH TIME CODE IN SOURCE VCR
2. TIME CODE READER IN READ MODE
3. CS100 ON
4. SOURCE VCR IN PLAY MODE

CS200 LINEAR ADAPTOR

The CS200A Linear Track Adaptor provides separate Audio Input and a separate Audio Output for the linear audio track on the AG1960. The addition of a independent input and output for the linear track expands the capabilities of the AG1960 to allow serparate recording and playback of the Linear track. This makes it possible to record three tracks at the same time when dubbing, recording on the linear track when the VCR is in play mode, and audio inserting "on the fly". The CS200 also lets you hear the audio track during functions such as Jog and Shuttle. The CS200 makes it possible to record voice overs that are mixed with audio that is on the HIFI tracks. The ability to record and playback independently makes the CS200 the Ideal accessory for any one who is using time code with the AG1960.



The CS200 is simple to install. No cutting, soldering, or special technical skills are required. The CS200 is a plug-in device which is installed by simply removing the VCR cover, un-plugging a small connector and plugging-in the CS200. The CS200 is a self contained device with its own power supply. No power from the VCR is used by the C200. When the CS200 is turned off, the AG1960 returns to its normal operation. Removal of the CS200 is as easy as the installation.

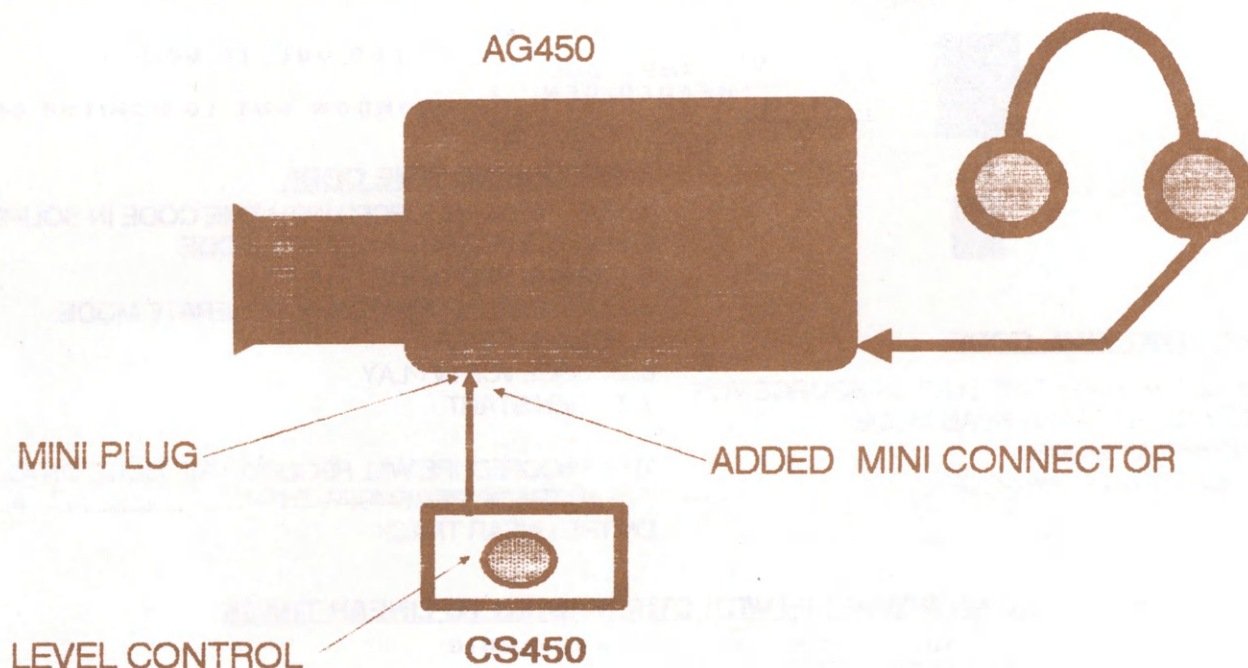
The CS200 does not provide Linear stereo. Contact Carlson-Strand.

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CS450

MANUAL AUDIO RECORD LEVEL CONTROL FOR PANASONIC AG450 CAMCORDERS

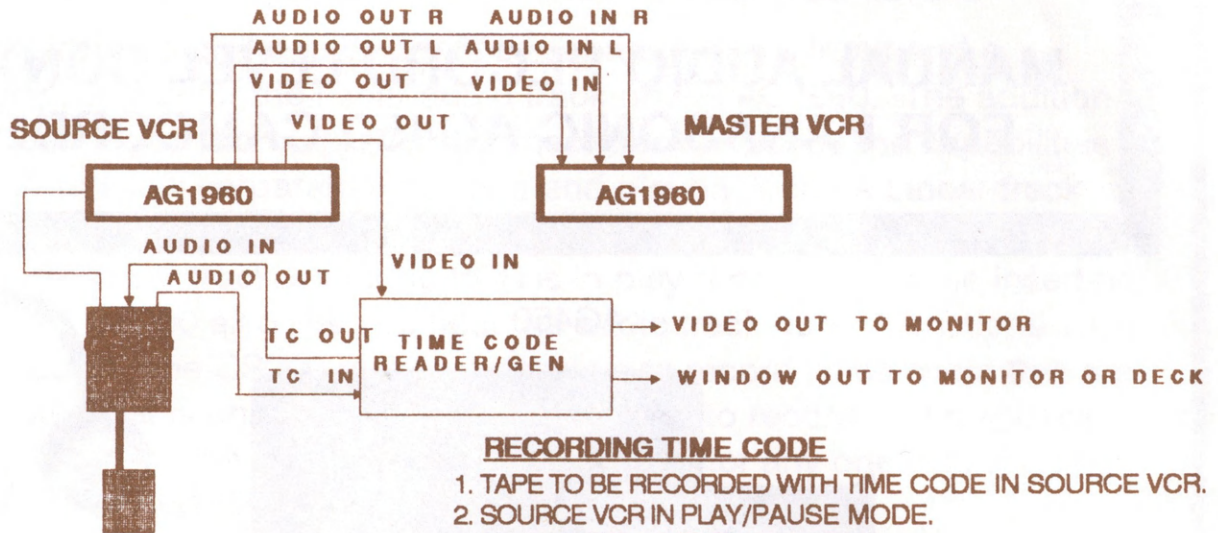


The CS450 Audio Level Control for the Panasonic AG450 camcorder provides the user with manual control over the audio record level. This can be very useful when shooting in situations where sound levels vary dramatically. The ALC (automatic level control) in most camcorders follows an average sound level to make the audio sound consistent. However, sudden loud sounds can make the ALC reduce the record level too much. These ALC circuits recover slowly, therefore, any sound following the loud sound will be recorded at a very low level. Another problem with ALC circuits occurs when shooting in quiet situations. Whenever the average sound is very low, the record level increases to record any sound available, causing a hiss sound. When the normal sound level returns the ALC circuit sees it as a very loud sound and reduces the record level. The ALC circuit is very good for most general shooting situations and should be used. The CS450 is designed to allow manual control of the audio level or use of the ALC. When using the CS450 for manual control, the audio level is monitored by listening to the audio via the earphone jack.

The CS450 is installed by Carlson-Strand in San Clemente. A mini jack is added to the left side of the AG450. The CS450 is a small box with a control on it. This control box is plugged into the mini jack when manual control is desired. When unplugged the ALC is in effect. The control box can be attached to the side of the camcorder with velcro connectors.

CS200 APPLICATIONS

RECORDING AND READING TIME CODE



RECORDING TIME CODE

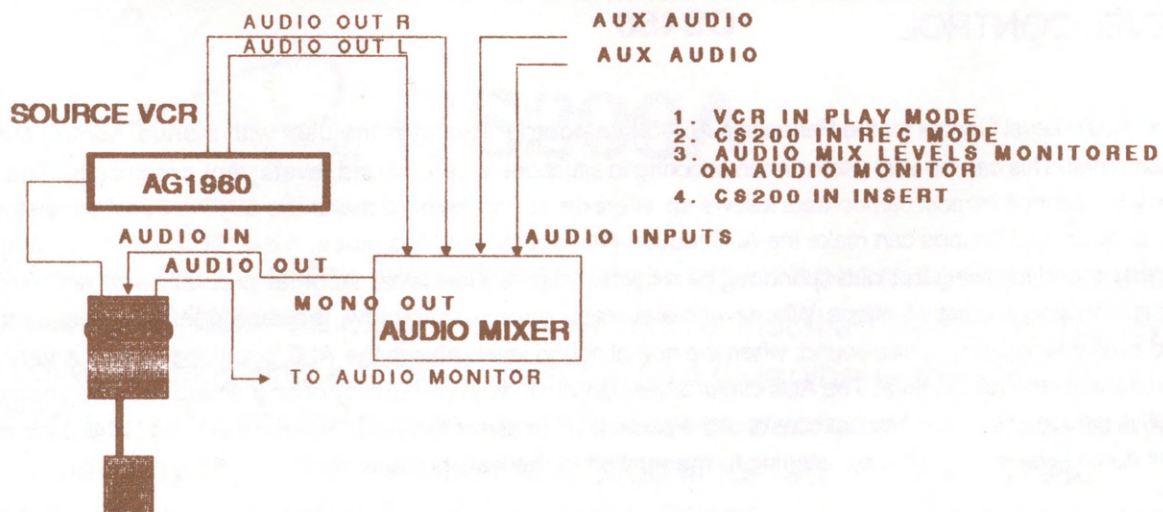
1. TAPE TO BE RECORDED WITH TIME CODE IN SOURCE VCR.
2. SOURCE VCR IN PLAY/PAUSE MODE.
3. CS200 IN REC MODE
4. TIME CODE GENERATOR IN GENERATE MODE.
5. CS200 IN INSERT
6. SOURCE VCR IN PLAY
7. TC GEN START.

THIS PROCEEDURE WILL RECORD TIME CODE ONTO THE LINEAR TRACK. REMEMBER, THIS WILL ERASE ALL AUDIO ON THE LINEAR TRACK.

READING TIME CODE

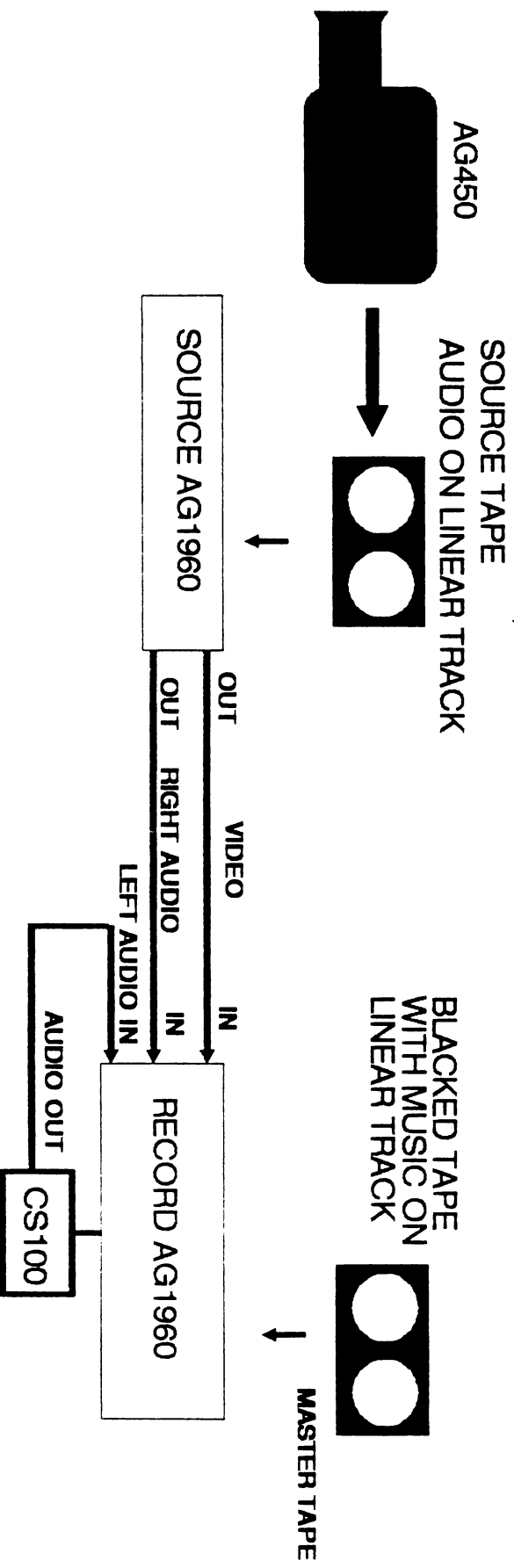
1. SOURCE TAPE WITH TIME CODE IN SOURCE VCR
2. TIME CODE READER IN READ MODE
3. CS200 IN PLAY MODE.
4. SOURCE VCR IN PLAY MODE

DOWN MIXING HIFI WITH OTHER AUDIO TO LINEAR TRACK



THE CS200 WILL RECORD ONTO THE LINEAR TRACK WHILE THE VCR IS IN PLAY MODE. THIS WILL GIVE YOU THE CAPABILITY TO RECORD 'ON THE FLY'. HIFI AUDIO CAN BE MIXED WITH OTHER AUDIO SOURCES AND RECORDED ONTO THE LINEAR TRACK OF THE SAME TAPE THEREBY SAVING ONE GENERATION. AFTER DOING THIS YOU CAN NOW INSERT NEW VIDEO WITHOUT LOSING THE ORIGINAL AUDIO. IT NOW RESIDES ON THE LINEAR TRACK. WHEN MAKING DISTRIBUTION COPIES, SIMPLY USE THE OUTPUT OF THE CS200 IN PLAY MODE FOR YOUR AUDIO.

HOW TO RECORD NATURAL SOUND, MUSIC, AND A VOICE OVER WHEN EDITING, USING THE CS100 OR CS200



1. RECORD (STRIPE) MUSIC ONTO LINEAR TRACK OF MASTER TAPE BY RECORDING BLACK VIDEO ALONG WITH AUDIO.
2. CONNECT OUTPUT OF CS100 OR CS200 TO THE LEFT AUDIO INPUT OF MASTER AG1960.
3. SELECT HIFI TRACKS ON HAND UNIT OF MASTER DECK.
4. PLACE BLACKED TAPE INTO MASTER DECK AND SOURCE TAPE INTO SOURCE DECK
5. PERFORM ALL EDITS IN "VIDEO INSERT MODE". DURING VIDEO INSERT, AUDIO, FROM THE SOURCE DECK WILL BE RECORDED ONTO THE RIGHT HIFI TRACK OF THE MASTER TAPE AND THE AUDIO FROM THE LINEAR TRACK OF THE MASTER TAPE WILL BE RECORDED ONTO THE LEFT HIFI TRACK OF THE MASTER TAPE.
6. RESULT: UPON COMPLETION OF VIDEO EDITING, NATURAL SOUND FROM SOURCE TAPE AND MUSIC ARE RECORDED ON THE HIFI TRACKS LEAVING THE LINEAR TRACK ON THE MASTER TAPE FREE TO AUDIO DUB ONTO.

FIRST PASS

RECORD MUSIC ONTO LINEAR
TRACK OF BLACKED MASTER TAPE

SECOND PASS

PERFORM VIDEO INSERTS

1. AUDIO FROM SOURCE DECK RECORDED ON RIGHT HIFI TRACK OF MASTER TAPE
2. AUDIO FROM LINEAR TRACK OF MASTER TAPE RECORDED ONTO LEFT HIFI TRACK OF MASTER TAPE.

THIRD PASS

VOICE OVER

1. AUDIO DUB VOICE OVER ONTO LINEAR TRACK OF MASTER TAPE.

END RESULT: 1. NATURAL SOUND ON HIFI RIGHT. 2. MUSIC ON HIFI LEFT. 3. VOICE OVER ON LINEAR TRACK.

HOW TO ORDER

All products are manufactured by The Carlson-Strand Co. in California. Self-installed products are shipped with complete installation instructions. Products installed by Carlson-Strand should be shipped to us in San Clemente, please call for shipping instructions. Prices are effective June 1, 1991 and are subject to change without notice.

CS100 Linear Adaptor (Panasonic AG1960)	\$175.00
CS100S Linear Adaptor (Sony SLV-R5UC)	\$175.00
CS100J Linear Adaptor (JVC HRS8000U)	\$175.00
CS200A Linear Adaptor (Panasonic AG1960)	\$350.00
CS300 Stereo Linear Modification (Panasonic AG1960)*	\$600.00
CS450 Audio Level Control (Panasonic AG450)*	\$175.00
CS460 Linear Adaptor (Panasonic AG460)*	\$225.00
GPI-12 External Trigger Kit (Panasonic WVJ-MX12)	\$125.00
GPI-12 (Installed)*	\$150.00
GPI-100 GPI Expander	\$225.00

*Requires installation by Carlson-Strand

Quantity	Product Number	Price
Shipping & Handling		\$ 8 . 50
C.O.D.		\$ 3 . 50
CA Local Sales Tax		
TOTAL		

SEND ORDER TO:
The Carlson-Strand Co.
P.O. 3761
San Clemente CA 92674

Shipments to:
The Carlson-Strand Co.
2730 Camino Capistrano #5
San Clemente CA 92672
Call First 714-492-8978

Name: _____
Company Name: _____
Shipping Address: _____
Street: _____
City _____ **State/Prov** _____ **Zip/Pc** _____
Telephone (very important) _____

TERMS:
Cash
Cashiers Check
Money Order
Net 30 on Approval

VCR INFORMATION:

BRAND: _____
MODEL# _____ **SERIAL#** _____

INFORMATION YOU REQUESTED



San Clemente, CA 92674-3761

P.O. 3761

The Carlson-Strand Co.

SPECIAL AUDIO/VIDEO PRODUCTS
AUDIO UPGRADES FOR THE
Panasonic AG1960 AG450 AG460
Sony SLVR5-UC JVC HRS8000U

The Carlson-Strand Co.